WHAT IS CLAIMED IS:

1. An inverter control unit for motor driving, comprising:

a rectifier circuit for converting into a DC power a first AC power inputted from an AC power supply, which includes a diode bridge and a reactor connected to an AC input side or a DC output side of the diode bridge and having a small inductance, with the diode bridge having a plurality of first driver elements;

an inverter for converting the DC power from the rectifier circuit into a second AC power so as to output the second AC power to a motor, which includes a plurality of second driver elements;

a capacitor for absorbing regenerative energy of the motor, which is connected between DC buses of the inverter and has a small capacitance; and

an overvoltage protecting circuit which is connected between the DC buses of the inverter in parallel with the capacitor so as to be actuated prior to breakdown of the first driver elements of the diode bridge and the second driver elements of the inverter.

2. The inverter control unit as claimed in Claim 1, wherein the overvoltage protecting circuit is formed by a surge absorber.

3. The inverter control unit as claimed in Claim 1, wherein the overvoltage protecting circuit is formed by a surge absorber and a gas arrester connected to the surge absorber in series.

4. In an air-conditioner including an inverter control unit for driving a motor, the inverter control unit comprising: a rectifier circuit for converting into a DC power a first AC power inputted from an AC power supply, which includes a diode bridge and a reactor connected to an AC input side or a DC output side of the diode bridge and having a small inductance, with the diode bridge having a plurality of first

driver elements; an inverter for converting the DC power from the rectifier circuit into a second AC power so as to output the second AC power to the motor, which includes a plurality of second driver elements; and a capacitor for absorbing regenerative energy of the motor, which is connected between DC buses of the inverter and has a small capacitance;

the improvement of the inverter control unit comprising:

an overvoltage protecting circuit which is connected between the DC buses of the inverter in parallel with the capacitor so as to be actuated prior to breakdown of the first driver elements of the diode bridge and the second driver elements of the inverter.

5. The air-conditioner as claimed in Claim 4, wherein the overvoltage protecting circuit is formed by a surge absorber.

6. The air-conditioner as claimed in Claim 4, wherein the overvoltage protecting circuit is formed by a surge absorber and a gas arrester connected to the surge absorber in series.